Device Errors

Pulse oximeters

MONITOR YOUR PATIENT CLOSELY TO AVOID SERIOUS INJURIES.

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A 77-YEAR-OLD WOMAN WAS HOSPITALIZED IN CRITICAL condition for emergency open-heart surgery. The nurse placed a pulse oximeter sensor on the patient's left thumb and taped it tightly. When she removed the sensor after the procedure, the thumb was cyanotic and swollen. The patient is now experiencing devascularization, and the circulatory outcome of the digit is unknown.

What went wrong?

To avoid serious injuries, you need to treat a pulse oximeter with the same respect you have for more complex medical devices. Assess the patient's peripheral vascular function before you apply the sensor. Place the sensor on a finger that blanches well and is polish-free. Don't place a sensor on the thumb and never tape it tightly. Check the site immediately after you place the sensor and at frequent intervals during a long surgical procedure. If the patient's peripheral circulation is questionable, use a nasal or earlobe sensor instead of a finger probe.

What precautions can you take?

Follow these recommendations to avoid injuries when using a pulse oximeter:

- Make sure your patient has stable peripheral vascular function before you place a pulse oximeter sensor.
- Clean the sensor site and remove any nail polish.
- If necessary, secure the sensor loosely using paper tape; never tape it tightly.
- Check the site immediately after applying the sensor to ensure that circulation is adequate.
- Include circulation checks with all patient assessments.
- Change the pulse oximeter site every 2 hours or according to your institution's protocol.
- Closely monitor patients with fragile skin, such as infants or elderly adults.
- Make sure you're current on how to use any pulse oximeter you're working with, including setting and maintaining all alarms. ■

Although you need to support the adverse event–reporting policy of your health carefacility, you may voluntarily report a medical device that doesn't perform as intended by calling MedWatch at 1-800-FDA-1088 (fax: 1-800-FDA-0178). The opinions and statements contained in this report are those of the author and may not reflect the views of the Department of Health and Human Services. *Device* Errors is coordinated by Chris Parmentier. RN.